

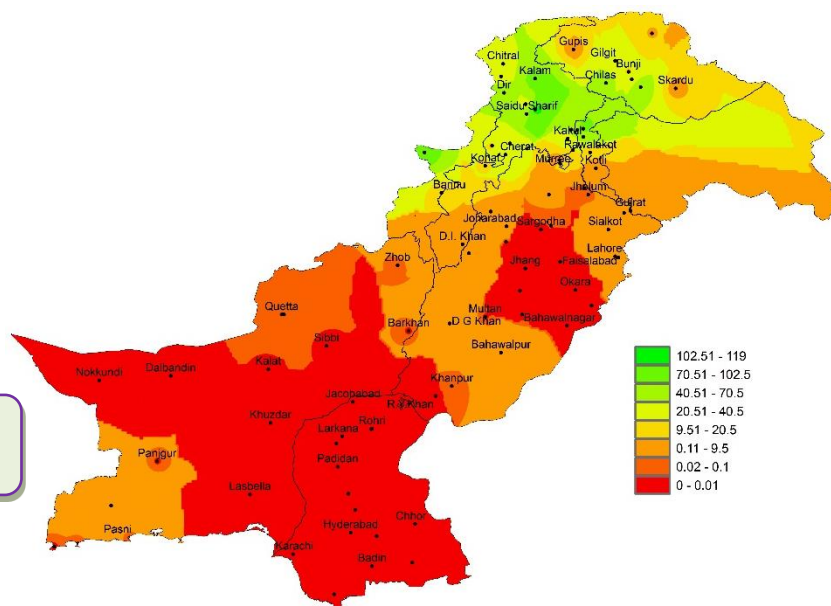
Weekly Weather and Crop Bulletin for Pakistan

**NATIONAL AGROMET CENTRE
PAKISTAN METEOROLOGICAL
DEPARTMENT SECTOR H-8/2,
ISLAMABAD.**

Phone: +92-51-9250299

Email: dirnamc@yahoo.com

**Rainfall Distribution (mm) during the previous
Week (12th March to 18th March, 2018)**



Contents

Highlights of past weather (General)	1-2
Past weather for Agri Plains	3-4
Crop progress	4
Min Temperature maps	5
R.H and GDD	6
Wind speed maps	7
Cloudiness maps	8
Farmers advisory	9
Weather Outlook	10
National data for selected stations	11-13
AgMIP findings	14

Highlights of Past Weather (12th March to 18th March, 2018)

Above normal night temperatures were observed all over the country.

Province wise rainfall distribution reported as follows:

- Light to moderate rainfall occurred in Punjab, KP, GB & Azad Kashmir during the previous week.
- Light rainfall reported from a few stations of Balochistan.
- Trace (Not Measureable) rainfall reported from two places of Sindh during the previous week.

Patron-in-Chief: Dr. Ghulam Rasul (Director General)

Editor-in-Chief: Asma Jawad Hashmi (Director)

Editor: Khalida Noureen (Meteorologist)

Past Weather of Provinces (12th March to 18th March, 2018)

Punjab

Light to moderate rainfall observed at most places in Punjab during the previous week. Weekly maximum and minimum temperatures recorded as 30.4°C & 14.6°C respectively. For the recent week on average 122.6 growing degree days were accumulated by the end of the last week. Average relative humidity recorded as 54% and wind speed in the morning/evening recorded as 1.1/2.4 knots. During the previous week highest amount of rainfall was reported as 20.1mm at Murree, lowest minimum temperature was recorded as 4.4°C at Murree.

Balochistan

Light rainfall observed at only one station with Trace (Not Measureable) rainfall at two places in Balochistan. Weekly maximum and minimum temperatures recorded as 28.4°C & 13.8°C respectively. For the recent week on average 111.6 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 44% and wind speed in the morning/evening recorded as 1.4/7.3 knots. During the previous week highest amount of rainfall was reported as 3.0mm at Turbat lowest minimum temperature was recorded as 3.0°C at Kalat.

Khyber Pakhtunkhwa

Light to moderate rainfall observed at most places in Khyber Pakhtunkhwa during the week. Weekly maximum and minimum temperatures recorded as 21.0°C & 8.3°C respectively. For the recent week on average 75.0 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 61% and wind speed in the morning/evening recorded as 1.7/2.5 knots. During the previous week highest amount of rainfall was reported as 119 mm at Malam Jabba &

lowest minimum temperature was recorded as -3.5°C at Kalam.

Gilgit-Baltistan and Azad Jammu & Kashmir

Light to moderate rainfall observed at only one station in Gilgit-Baltistan and Azad Jammu & Kashmir during the week. Weekly maximum and minimum temperatures recorded as 17.3°C & 5.9°C respectively. For the recent week on average 60.0 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 58% and wind speed in the morning/evening recorded as 1.2/2.5 knots. During the previous week highest amount of rainfall was reported as 57.1 mm at Astore and lowest minimum temperature was recorded as -2.5°C at Astore.

Sindh

Trace (Not Measureable) rainfall reported from two places of Sindh during the previous week. Weekly maximum and minimum temperatures recorded as 35.3°C & 18.5°C respectively. For the recent week, on average 151.2 growing degree days were accumulated by the end of last week. Average relative humidity recorded as 49% and wind speed in the morning/evening recorded as 2.1/4.6 knots. During the previous week lowest minimum temperature was recorded as 13.5 °C at Mirpur Khas.

Past Weather for Major Agricultural Plains (12th March to 18th March, 2018)

Rawalpindi (Potohar region)

Dry weather reported from Rawalpindi during the week; however, cloudiness in the morning/evening recorded as 3.0/4.9 Oktas while average relative humidity observed as 63%. Mean night time temperature recorded as 11.6°C & for the recent week 100.9 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.5/1.2 knots.

Faisalabad (Central Punjab)

Dry weather reported from Faisalabad during the week; however, cloudiness in the morning/evening recorded as 0.9/2.1 Oktas while average relative humidity observed as 55%. Mean night time temperature recorded as 16.1°C & for the recent week 131.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.3/1.1 knots.

Tandojam (Lower Sindh)

Rainfall reported as 2.0 mm from Tandojam during the week; however, cloudiness in the morning/evening recorded as 0.0/0.3 Oktas while average relative humidity observed as 56%. Mean night time temperature recorded as 15.3°C & for the recent week 142.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.9/2.8 knots.

Usta Muhammad (Eastern Balochistan)

Dry weather reported from Usta Muhammad during the week; however, cloudiness in the morning/evening recorded 0.0/0.0 Oktas while average relative humidity observed as 57%. Mean night time temperature recorded as 17.2°C & for the recent week 139.1 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.6/0.6 knots.

Quetta (Northern Baluchistan)

Dry weather reported from Quetta during the week; however, cloudiness in the morning/evening recorded as 1.6/2.9 Oktas while average relative humidity observed as 25%. Mean night time temperature recorded as 9.2°C & for the recent

week 71.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 3.1/4.7 knots.

Past Weather for Sub-Regional Agricultural Plains (12th March to 18th March, 2018)

Multan

Dry weather reported from Multan during the week; however, cloudiness in the morning/evening recorded as 0.5/2.1 Oktas while average relative humidity observed as 53%. Mean night time temperature recorded as 16.7°C & for the recent week 133.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 1.7/5.7 knots.

Lahore

Rainfall reported as 1.30 mm from Lahore during the week; however, cloudiness in the morning/evening recorded as 1.7/2.7 Oktas while average relative humidity observed as 52%. Mean night time temperature recorded as 17.9°C & for the recent week 136.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.7/4.3 knots.

Zhob

Rainfall reported as Trace (Not Measureable) from Zhob during the week; however, cloudiness in the morning/evening recorded as 1.5/3.4 Oktas while average relative humidity observed as 33%. Mean night time temperature recorded as 12.1°C & for the recent week 92.5 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.5/9.0 knots.

Murree

Rainfall reported as 20.01 mm from Murree during the week; however, cloudiness in the morning/evening recorded as 3.5/4.0 Oktas while average relative humidity observed as 54%. Mean night time temperature recorded as 5.9°C & for the recent week 40.4 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 2.8/1.1 knots.

D.I. Khan

Rainfall reported as 3.01 mm from D.I. Khan during the week; however, cloudiness in the morning/evening recorded as 2.2/0.4 Oktas while

average relative humidity observed as 62%. Mean night time temperature recorded as 16.0°C & for the recent week 127.0 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.7/2.0 knots.

Peshawar

Rainfall reported as 20.0 mm from Peshawar during the week; however, cloudiness in the morning/evening recorded as 3.7/5.4 Oktas while average relative humidity observed as 68%. Mean night time temperature recorded as 13.4°C & for the recent week 100.3 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.7/2.0 knots.

Kalam

Rainfall reported as 80.0 mm from Kalam during the week; however, cloudiness in the morning/evening recorded as 4.2/5.4 Oktas while average relative humidity observed as 65%. Mean night time temperature recorded as -1.1°C. Wind speed recorded in the morning/evening as 3.3/0.6 knots.

Gilgit

Rainfall reported as 35.90 mm from during the week; However, cloudiness in the morning/evening recorded as 5.8/6.6 Oktas while average relative humidity observed as 63%. Mean night time temperature recorded as 5.1°C & for the recent week 39.8 growing degree days accumulated by the end of last week. Wind speed recorded in the morning/evening as 0.7/1.1 knots.

Skardu

Rainfall reported as 5.0 mm from Skardu during the week; However, cloudiness in the morning/evening recorded as 5.5/6.0 Oktas while average relative humidity observed as 52%. Mean night time temperature recorded as 0.6°C. Wind speed recorded in the morning/evening as 0.0/1.6 knots.

Crop Situation for Major Agricultural Plains (Based on data from Regional Agro met Centers)

Potohar Region (Rawalpindi)

There is presently no crop grown in the fields of RAMC Rawalpindi.

Central Punjab (Faisalabad)

There is presently one crop in the fields of RAMC Faisalabad (in irrigated Conditions).

Wheat(Galaxy); Very Good, Flowering stage completed.

Lower Sindh (Tandojam)

There is presently one crop in the fields of RAMC Tandojam (in irrigated Conditions).

Wheat (Sindh); Good, at full Maturity stage.

Northern Baluchistan (Quetta)

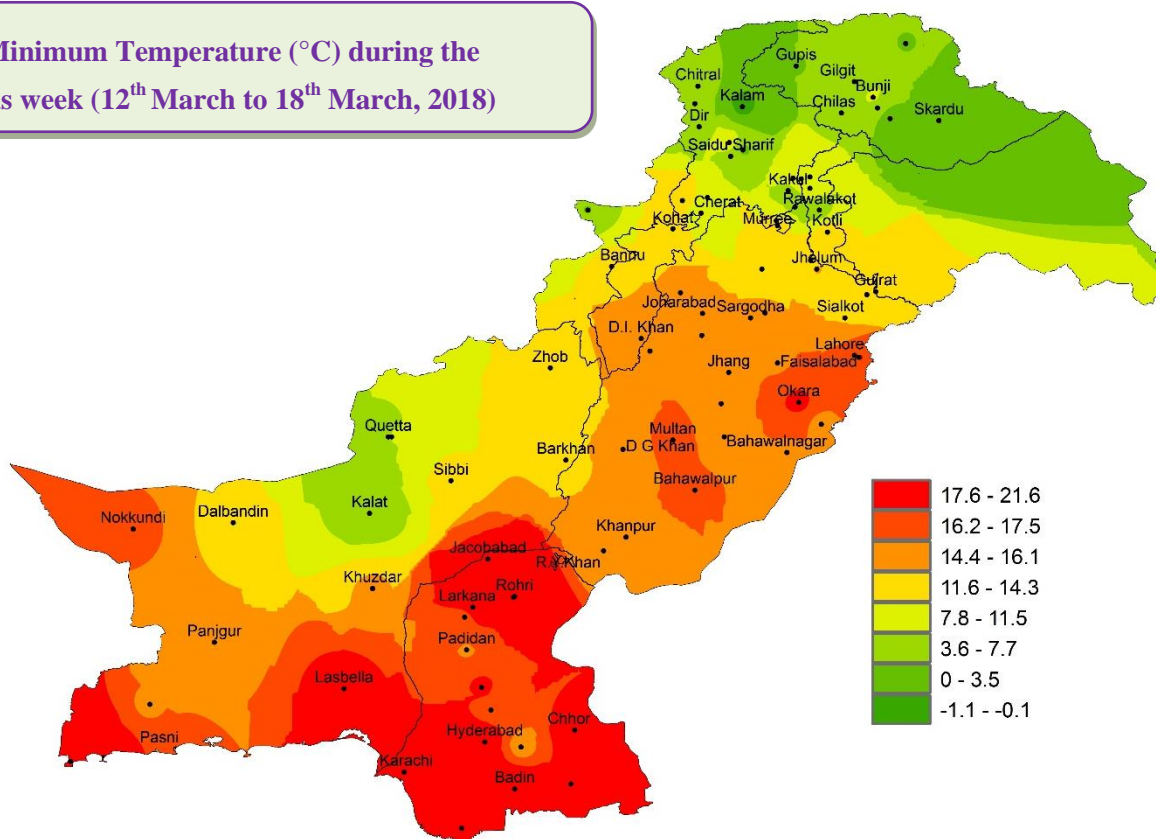
There is presently no crop grown in the fields of RAMC Quetta.

Eastern Baluchistan (Usta Muhammad)

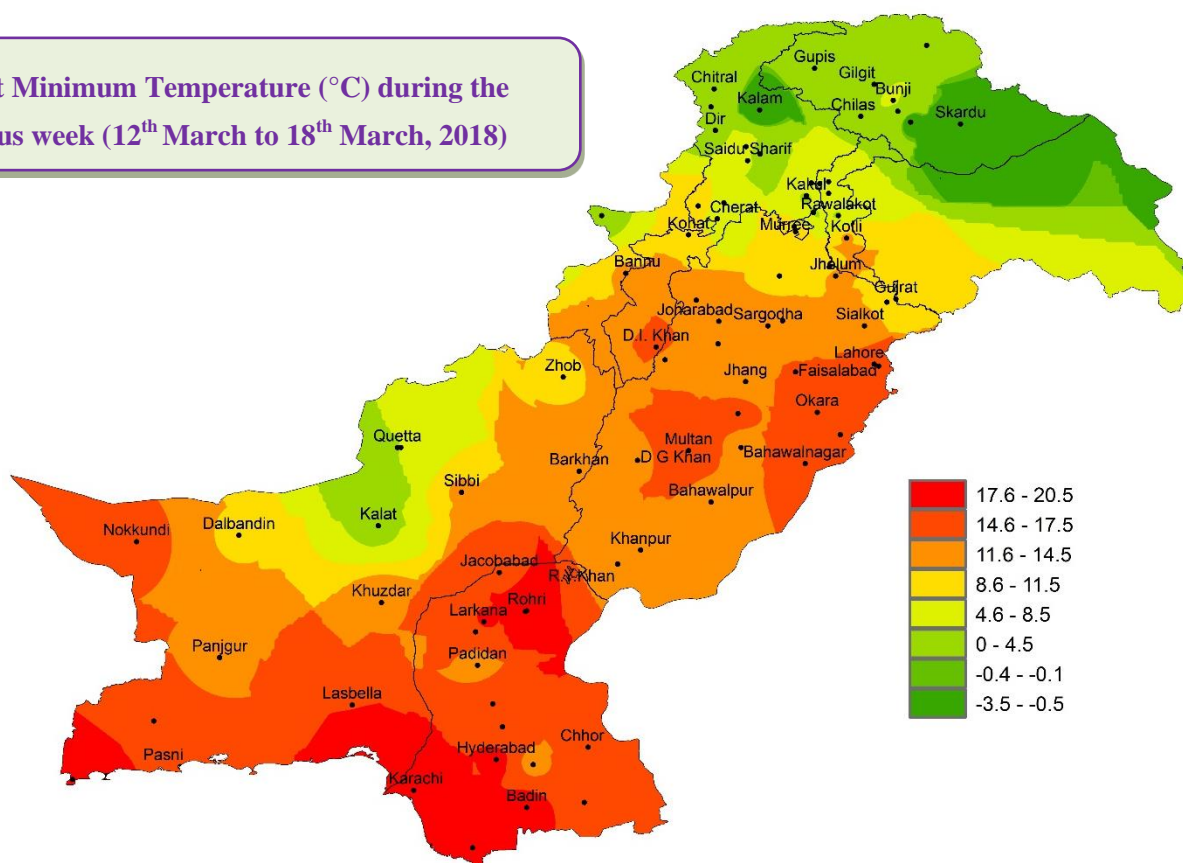
There is presently one crop grown in the fields of RAMC Usta Muhammad (in irrigated Conditions).

Wheat (Galaxy); Good, at Milk Maturity stage.

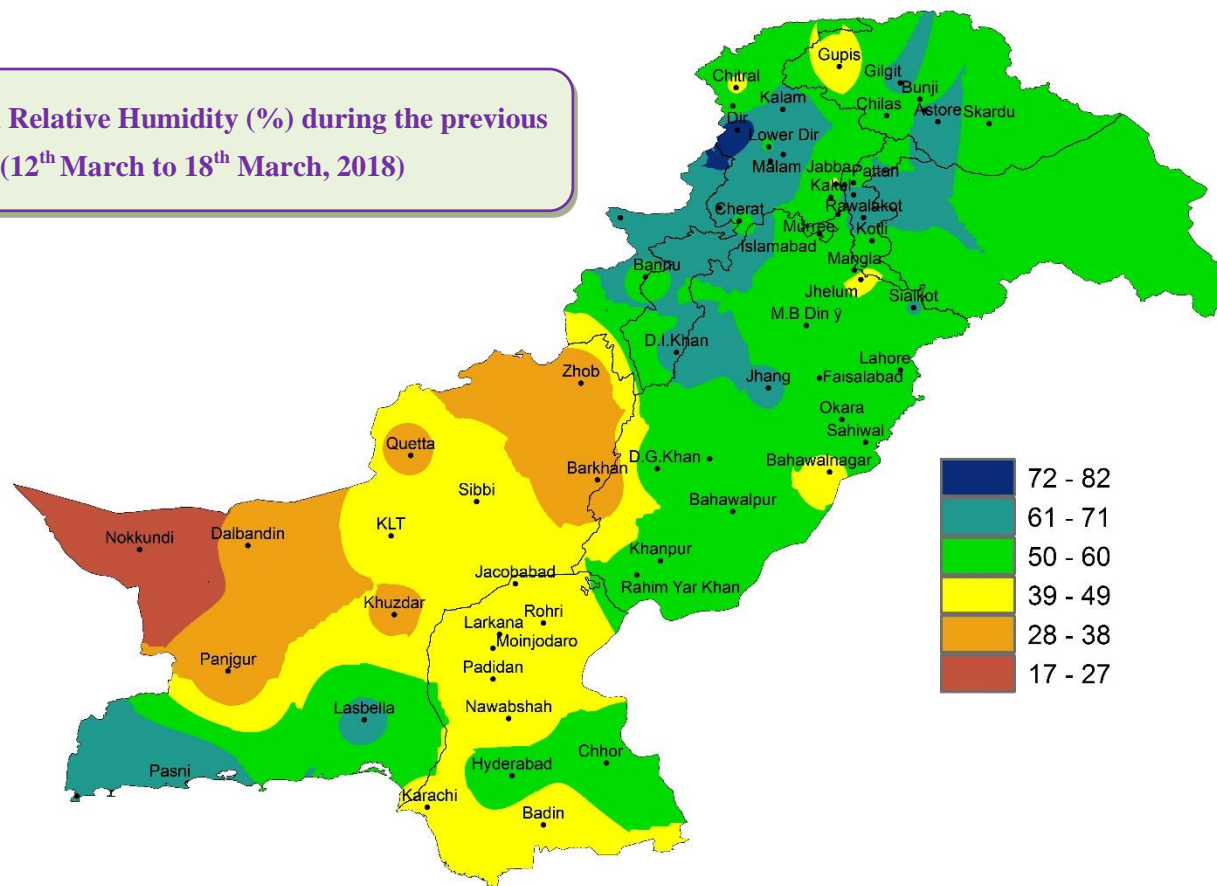
**Mean Minimum Temperature (°C) during the
Previous week (12th March to 18th March, 2018)**



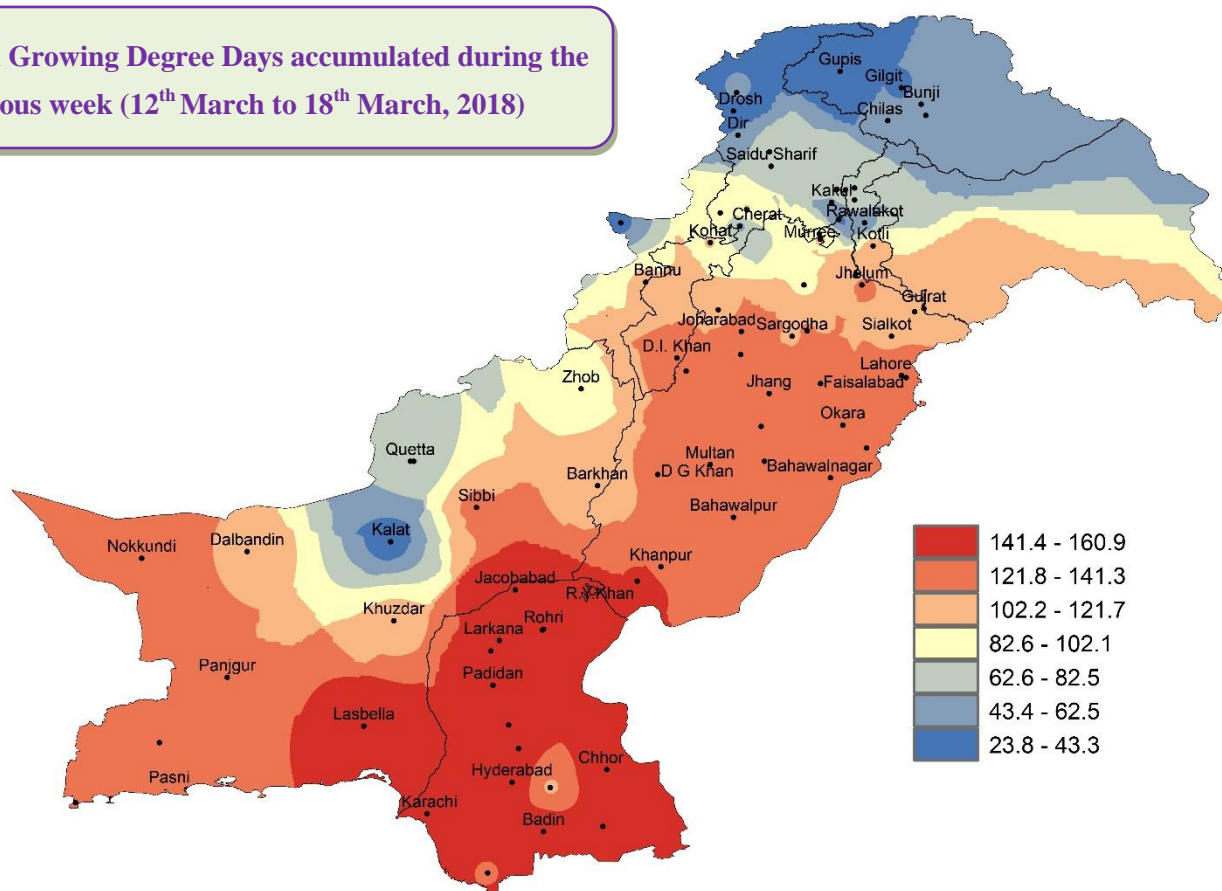
**Lowest Minimum Temperature (°C) during the
Previous week (12th March to 18th March, 2018)**



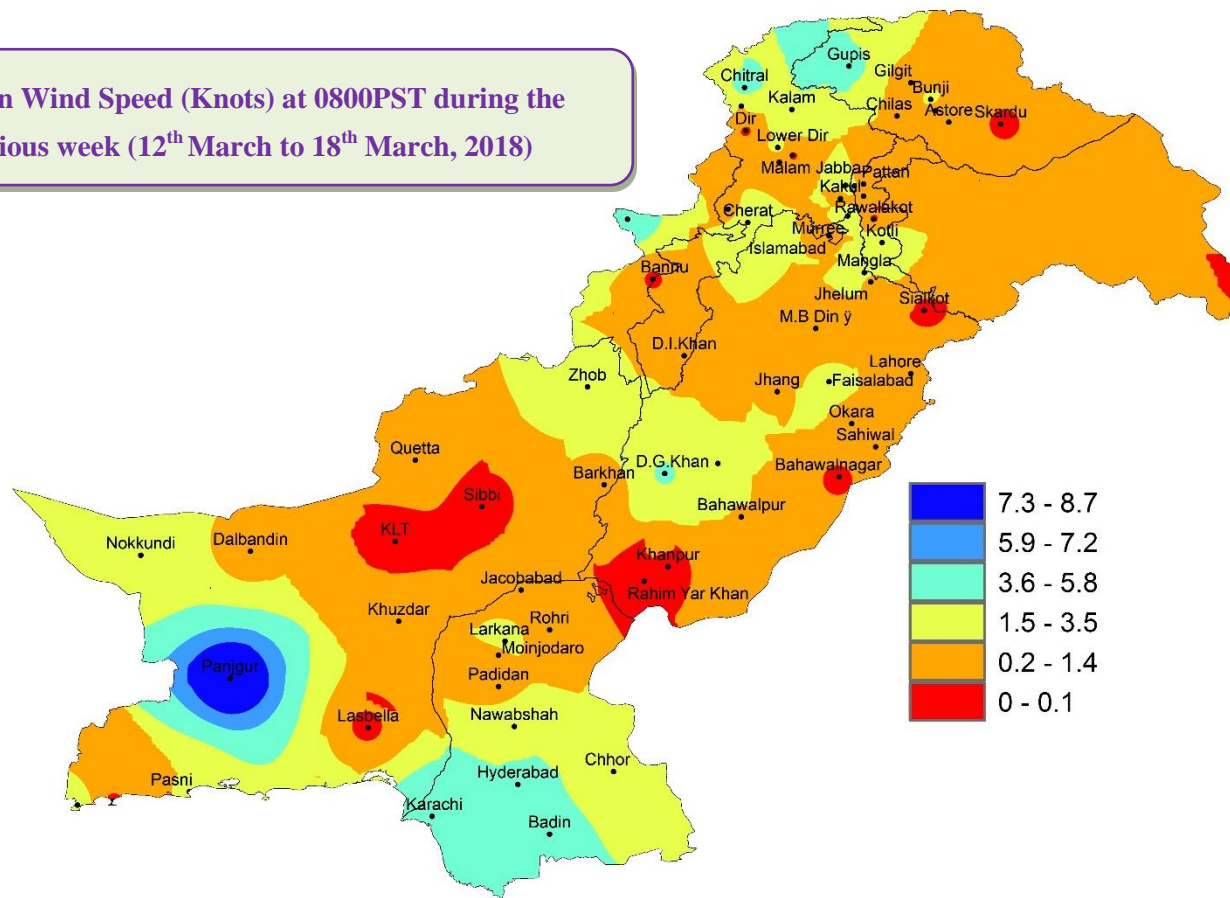
Mean Relative Humidity (%) during the previous week (12th March to 18th March, 2018)



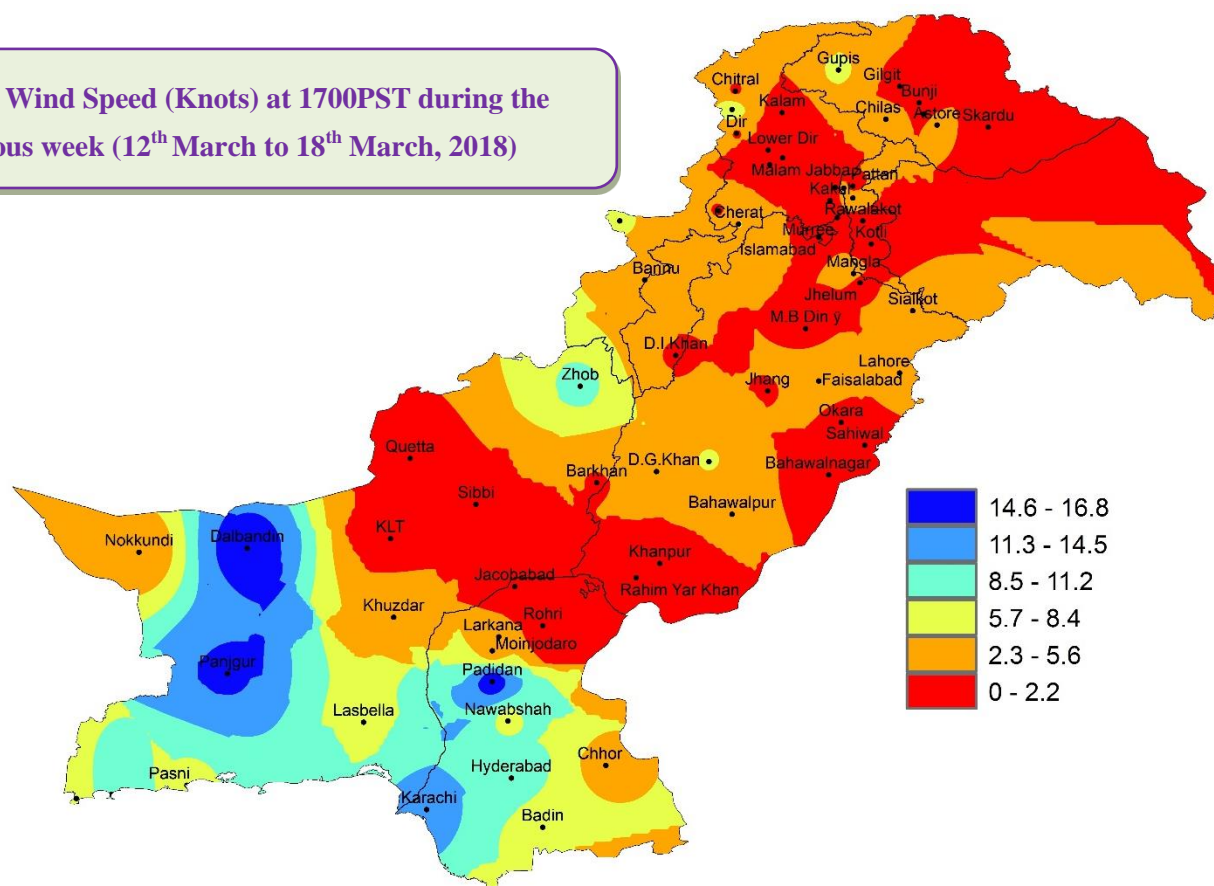
Total Growing Degree Days accumulated during the previous week (12th March to 18th March, 2018)



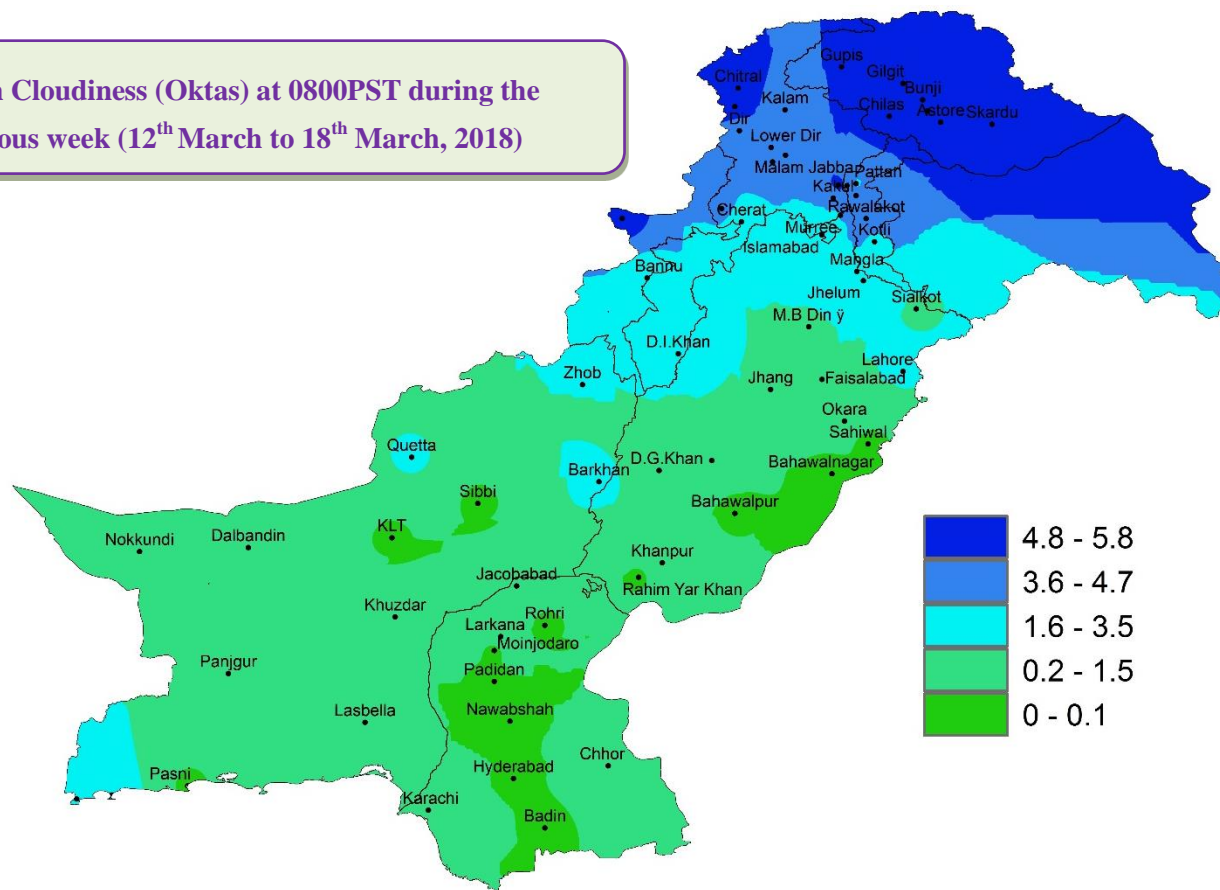
Mean Wind Speed (Knots) at 0800PST during the previous week (12th March to 18th March, 2018)



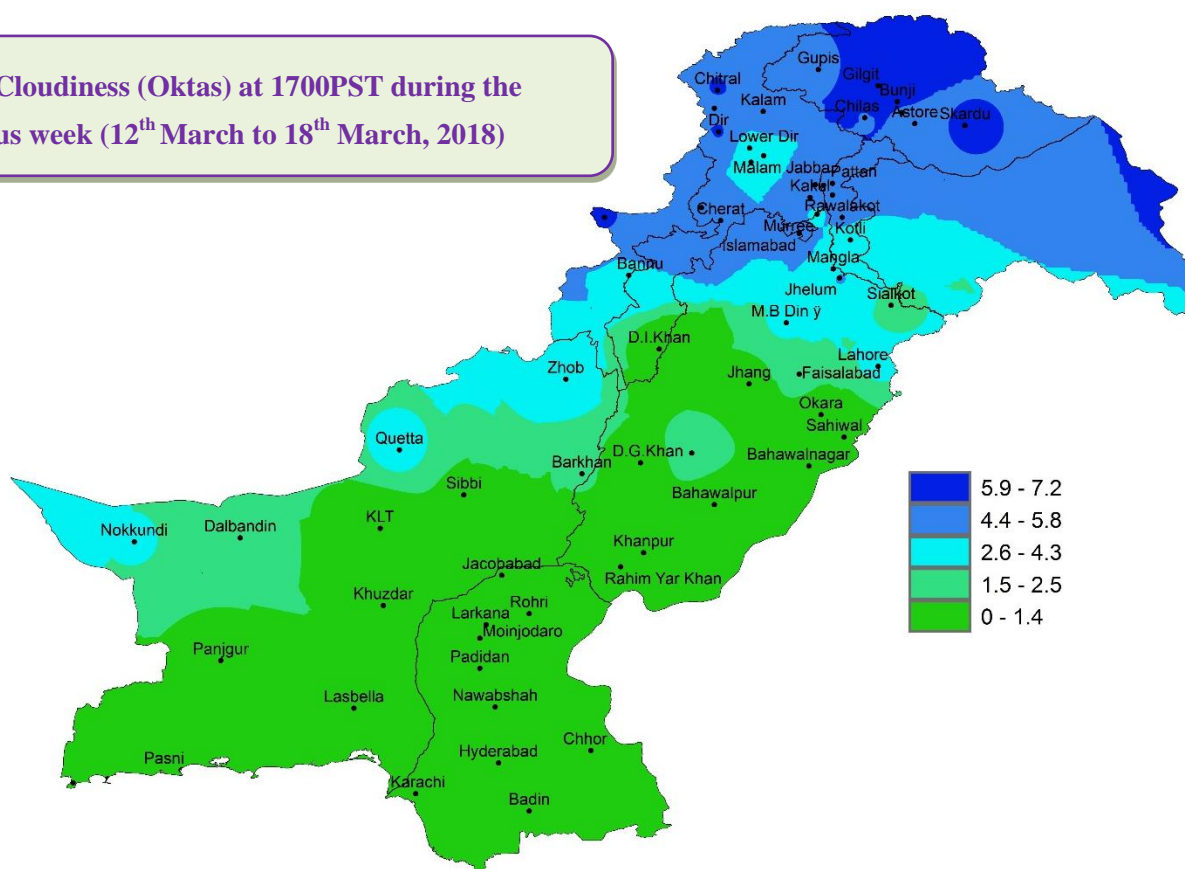
Mean Wind Speed (Knots) at 1700PST during the previous week (12th March to 18th March, 2018)



Mean Cloudiness (Oktas) at 0800PST during the previous week (12th March to 18th March, 2018)



Mean Cloudiness (Oktas) at 1700PST during the previous week (12th March to 18th March, 2018)



Weekly Weather Advisory for Farmers
(19th March to 25th March, 2018)

A westerly wave is present along western parts of the country and likely to enter central and upper parts of the country on Monday (night) and may persist upper parts of the country till Wednesday afternoon.

MONDAY (19-03-2018)

Partly cloudy weather conditions are expected in most upper parts of the country. However, dust-thunderstorm-rain with gusty winds is expected at isolated places in Quetta, Zhob, Malakand divisions and upper FATA during evening/night

TUESDAY (20-03-2018)

Cloudy weather conditions are expected in most upper and central parts of the country. However, dust-thunderstorm-rain with gusty winds is expected at scattered places in Quetta, Zhob, D.G. Khan, Multan, Rawalpindi, Malakand, Hazara, Peshawar, Bannu, D.I. Khan divisions, FATA, Islamabad while at isolated places in Kalat, Sahiwal, Bahawalpur, Faisalabad, Sargodha, Lahore, Mardan, Kohat divisions, Gilgit-Baltistan and Kashmir.

WEDNESDAY (21-03-2018)

Rain-thunderstorm with gusty winds is expected at isolated places in Rawalpindi, Sargodha, Lahore, Faisalabad, Gujranwala, Malakand, Hazara, Peshawar, Mardan divisions, Islamabad, FATA and Kashmir. Dry weather is expected elsewhere in the country.

THURSDAY (22-03-2018)

Mainly dry weather is expected in most parts of the country. However, rain-thunderstorm with gusty

winds is expected at isolated places in Kashmir and its adjoining hilly areas.

FRIDAY (23-03-2018)

Mainly dry weather is expected in most parts of the country.

SATURDAY (24-03-2018)

Mainly dry weather is expected in most parts of the country. However, rain-thunderstorm with gusty winds is expected at isolated places in upper FATA and its adjoining areas.

SUNDAY (25-03-2018)

Mainly dry weather is expected in most parts of the country. However, rain-thunderstorm with gusty winds is expected at isolated places in upper FATA and its adjoining areas.

ADVISES FOR FARMERS

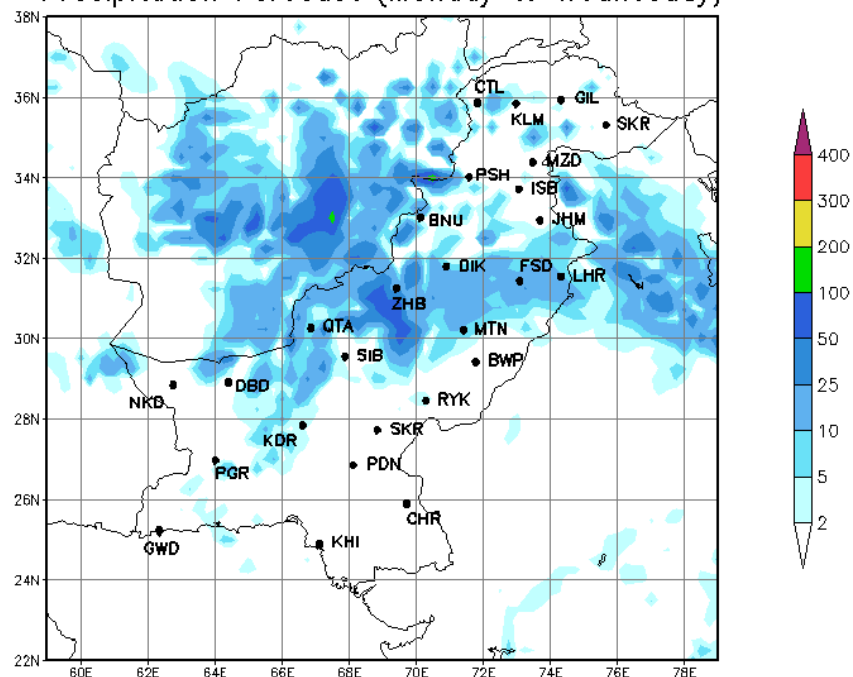
During the last week, light to moderate rainfall was observed in most of the agricultural plains of the country. In the next week this pattern is seem persist in the agricultural plains of the country. Accordingly, following advises are suggested for the farming community.

- Necessary precautionary measures may be taken to protect crops/nurseries from effects of weather extremes.
- Crops/Nurseries may be irrigated according to the rainfall prediction.
- Removal of weeds from the fields must be ensured.

Weather Outlook from 19th to 25th March 2018

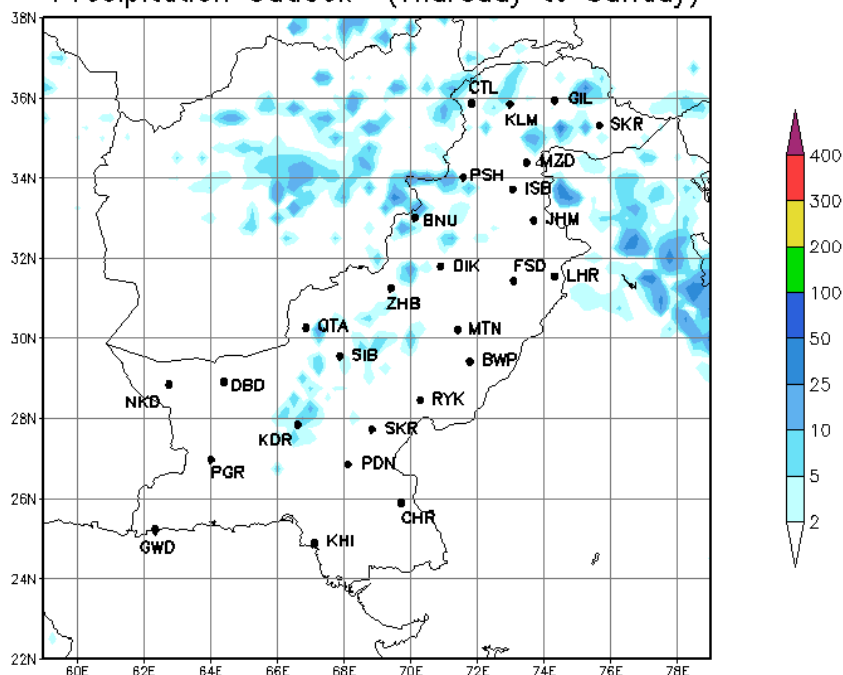
The outlook for the period 19th to 21st March, 2018 shows that light to moderate rainfall is expected at most places in KP, upper Balochistan and Punjab while scattered places of GB & Azad Kashmir.

Precipitation Forecast (Monday to Wednesday)



The outlook for the period 22nd to 25th March, 2018 shows that light rainfall is expected at scattered places of Gilgit-Baltistan, Azad Kashmir, Balochistan and KP.

Precipitation Outlook (Thursday to Sunday)



National Weather Data of Selected Cities (12th March to 18th March, 2018)

Stations	Minimum Night time Temperature (°C)		Growing Degree Days	Relative Humidity (%)	Rainfall (mm)	Cloudiness (Oktas) 0800 PST	Cloudiness (Oktas) 1700 PST	Wind Speed (Knots) 0800 PST	Wind Speed (Knots) 1700 PST
	Mean	Lowest							
Astore	-0.4	-2.5	**	64	57.10	5.2	5.3	1.0	2.6
Badin	20.4	19.0	157.3	44	0.00	0.0	0.6	4.0	5.7
Bahawalnagar	15.9	15.5	139.0	47	0.00	0.0	0.6	0.0	0.0
Bahawalpur	16.3	13.9	136.3	52	1.00	0.0	0.7	1.3	2.9
Balakot	10.3	8.3	76.6	45	47.40	5.0	4.9	2.3	1.1
Bannu	13.1	12.0	106.5	59	12.00	2.8	4.2	0.0	4.0
Barkhan	13.9	13.0	107.8	29	0.00	1.8	1.6	0.7	2.0
Bunji	8.3	5.0	52.3	53	17.81	5.8	7.3	1.7	1.7
Cherat	8.1	6.0	58.0	59	27.00	3.2	4.7	3.3	5.7
Chhor	18.6	16.5	160.8	52	0.00	0.7	1.3	2.3	4.9
Chilas	6.4	3.0	51.3	52	50.00	5.7	5.7	1.3	3.4
Chitral	5.7	2.6	44.4	47	31.60	4.8	5.9	4.3	1.7
D.G.Khan	14.9	14.3	126.2	54	1.21	0.3	0.7	3.7	5.1
D.I.Khan	16.0	15.0	127.0	62	3.01	2.2	0.4	0.7	2.0
Dalbandin	13.4	11.0	119.0	29	0.01	0.8	2.3	0.7	16.4
Dir	5.6	3.0	43.8	82	63.00	4.3	5.9	0.0	2.0
Drosh	3.7	2.2	39.2	52	27.40	5.0	5.3	1.3	8.0
Faisalabad	16.1	15.5	131.0	55	0.00	0.9	2.1	1.3	1.1
Garidopatta	9.8	8.0	78.6	68	42.81	3.8	5.6	0.3	4.3
Gawader	19.9	19.0	123.5	71	0.00	2.0	0.9	0.0	10.9
Gilgit	5.1	4.0	39.8	63	35.90	5.8	6.6	0.7	1.1
Gupis	3.4	2.0	23.8	45	5.00	4.7	5.6	4.0	6.0
Hyderabad	19.4	18.5	157.3	53	0.00	0.0	0.4	4.0	11.1

Islamabad	11.3	8.0	96.2	58	7.00	2.2	4.7	0.7	1.7
Jacobabad	18.2	17.0	148.7	48	0.01	0.7	0.1	0.3	0.0
Jhang	15.2	13.8	128.4	61	0.00	1.3	0.7	1.3	2.0
Jhelum	14.4	12.2	124.5	48	0.01	2.8	4.4	0.7	1.4
Jiwani	19.3	18.0	135.8	69	0.00	2.5	0.0	2.0	5.7
Kakul	6.1	4.0	59.0	60	31.01	3.5	5.1	0.7	1.1
Kalam	-1.1	-3.5	**	65	80.00	4.2	5.4	3.3	0.6
Kalat	3.7	3.0	35.0	41	0.00	0.0	0.0	0.0	0.6
Karachi	21.6	20.5	154.0	47	0.00	1.3	0.6	5.3	12.3
Khanpur	15.5	14.5	141.0	51	0.01	0.8	0.1	0.0	0.3
Khuzdar	14.9	14.0	110.3	37	0.00	0.5	1.4	0.3	5.1
Kotli	14.0	12.0	112.9	51	2.00	3.3	3.1	2.7	1.1
Lahore	17.9	16.5	136.5	52	1.30	1.7	2.7	0.7	4.3
Larkana	19.4	18.5	147.0	46	0.00	0.6	0.6	2.0	2.9
Lasbella	18.5	17.5	160.5	62	0.00	0.8	0.0	0.0	7.7
Lower Dir	10.4	7.0	82.3	59	24.00	4.5	3.9	2.0	2.0
M.B Din	14.7	12.5	122.5	57	0.01	1.2	2.7	0.3	1.1
Malam Jabba	2.4	1.0	**	68	119.00	4.2	3.9	0.0	0.0
Mangla	13.5	10.5	117.0	50	0.01	3.3	3.9	2.7	3.1
Mir Khani	6.5	4.0	54.3	63	33.20	4.8	4.9	0.8	2.0
Moinjodaro	16.6	14.5	144.8	48	0.00	0.0	0.3	1.0	3.7
Multan(PBO)	16.7	15.7	133.5	53	0.00	0.5	2.1	1.7	5.7
Murree	5.9	4.4	40.4	54	20.01	3.5	4.0	2.8	1.1
Muzaffarabad	8.8	5.4	74.7	61	46.01	4.5	5.6	1.7	3.3
Nawabshah	17.8	17.0	160.0	46	0.00	0.0	0.7	3.0	7.4
Nokkundi	16.7	15.5	133.5	17	0.01	1.2	2.6	1.7	2.9

Okara	17.9	17.0	140.8	55	0.00	0.5	0.6	1.3	0.9
Padidan	16.0	13.5	157.3	49	0.00	0.0	1.1	0.8	16.9
Panjgur	14.6	14.0	122.0	32	0.00	0.7	0.7	8.7	15.0
Parachinar	3.4	1.0	40.1	70	89.00	5.2	5.9	5.3	5.9
Pasni	16.8	16.0	128.3	69	0.00	0.0	0.4	1.5	7.6
Pattan	9.1	7.0	69.5	55	93.00	3.3	5.0	0.0	0.9
Peshawar	13.4	10.5	100.3	68	20.00	3.7	5.4	0.7	2.0
Quetta	9.2	6.5	71.3	25	0.00	1.6	2.9	3.1	4.7
Rahim Yar Khan	15.2	12.8	142.3	51	0.00	0.0	0.0	0.0	0.3
Rawalakot	5.4	4.3	46.9	70	13.00	4.3	4.9	0.0	1.1
Rawalpindi	11.6	9.5	100.9	63	0.00	3.0	4.9	0.5	1.2
Rohri	19.4	18.5	156.0	45	0.01	0.0	0.7	0.3	1.1
Sahiwal	15.7	14.6	128.6	57	0.00	0.0	0.6	0.3	0.6
Saidu Sharif	7.0	5.0	68.0	62	67.00	3.8	4.3	0.0	0.0
Sialkot	13.2	10.5	114.3	60	1.20	1.3	2.1	0.0	3.4
Sibbi	12.9	12.0	127.8	42	0.00	0.0	1.1	0.0	1.1
Skardu	0.6	-1.5	**	52	5.00	5.5	6.0	0.0	1.6
Tandojam	15.3	14.0	142.3	56	2.00	0.0	0.3	0.9	2.8
Usta.M	17.2	17.0	139.1	57	0.00	0.0	0.0	0.6	0.6
Zhob	12.1	11.0	92.5	33	0.01	1.5	3.4	2.5	9.0

*** Shows that data was not available.

*Trace shows not-measurable data

Findings of AgMIP Pakistan, University of Agriculture, Faisalabad

1. There would be significant increase in temperature i.e., 2.8°C in day and 2.2°C in the night during mid-century (2040-2069).
2. There would be significant variability in rainfall patterns (about 25% increase in summer & 12% decrease in winter during 2040-2069).
3. Climate Change will affect the crop yields negatively (about 17% for rice and 14 % for wheat).
4. If there will be no adaptation to Climate Change, majority of farmers would be the economic losers.
5. With Adaptation to Climate Change (through technology and management), there would be significant decrease in poverty and improvement in the livelihood of farming community.

*(Agricultural Model Inter-comparison and Improvement Project (AgMIP) Pakistan
2012-2014)*

- 1- سال 2040-69 کے دوران درجہ حرارت میں قابل ذکر اضافہ ہو سکتا ہے۔ جو کہ دن کے وقت 2.8°C اور رات کو 2.2°C تک ہوگا۔
- 2- گرمیوں کی بارش میں 25 فیصد اضافہ اور سردیوں کی بارش میں 12 فیصد تک کمی کا امکان ہے۔
- 3- مندرجہ بالا موسمی تغیرات کی وجہ سے دھان کی پیداوار میں 17 فیصد اور گندم کی پیداوار میں 14 فیصد تک کمی ہو سکتی ہے۔
- 4- اگر موسمی تغیرات کا مناسب بندوبست نہ کیا گیا۔ تو کسانوں کی اکثریت کو معاشی نقصان کا سامنا کرنا پڑے گا۔
- 5- موسمی تغیرات کے سدباب (بذریعہ نئی ٹیکنالوجی کا استعمال اور بہتر نظم و نسق) سے غربت میں کمی اور کسانوں کی زندگی میں خوشحالی لائی جاسکتی ہے۔

(ایگمپ پاکستان 2014-2012)